

NOTE

Pedipalpal Anomalies in *Neobisium simoni*  
(L. Koch) and *N. bernardi* Vachon  
(Neobisiidae: Pseudoscorpiones: Arachnida)

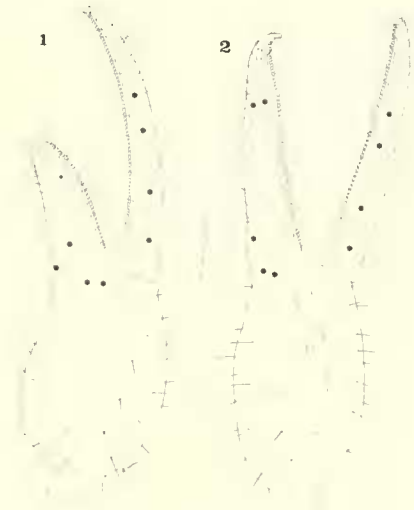
Pseudoscorpions have been found with segmental anomalies involving the sclerites (tergites and sternites) (Ćurčić & Dimitrijević, 1982. *Revue Arachnologique*, 4, 143-150. 1984. *Arch. Sci. Belgrade*, 36, 9P-10P. 1985. *Revue Arachnologique*, 6, 91-98. 1986. *Actas X Congr. Int. Aracnol. Jaca/Espana*, 1, 17-23, and references cited therein). A curious aberration other than anomaly in sclerite structure has been reported by Vachon (1947. *Bull. biol. Fr. Belg.* 81, 177-194), who recorded a protonymph of *Chelifer cancrivorus* (Linnaeus) with the right foreleg fused basally with the pedipalp. In addition, Chamberlin (1949. *Amer. Mus. Novit.* 1430, 1-57) reported one of the most unusual anomalies yet observed in pseudoscorpions: in the holotype of *Xenochelifer davidi* Chamberlin, the movable finger of the left chela is greatly reduced, being only half the normal length. The fixed finger is apparently normal.

As far as the family Neobisiidae is concerned, pedipalpal anomaly has been recorded in a single female of *N. carpaticum* Beier (Ćurčić, 1980. *Bull. Brit. Arachnol. Soc.* 5, 9-15). In this pseudoscorpion, the fixed finger of the left pedipalpal chela is greatly reduced, being two-thirds the normal length. Consequently, four distal trichobothria (*ist*, *est*, *it* and *et*) are missing and there are also fewer teeth on this finger in comparison to that of the right chela which is normal. The movable finger is apparently normal. In other Neobisiid species, malformations of other appendages (chelicerae, walking legs) occur rarely, as was already observed by Ćurčić (1980). The aim of this note is to express quantitatively and qualitatively the phenomena of pedipalpal teratology in the species studied in order to

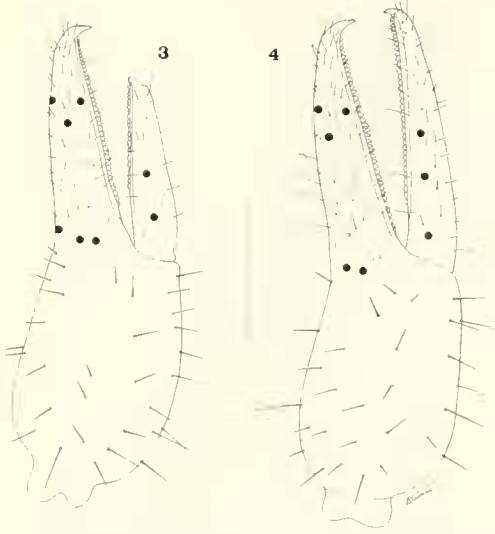
assess the pathomorphological traits of such aberrations.

In a collection of pseudoscorpions made by one of us (RND) at Passarole, near Moulis (Ariège), France, during July 1987, one female of *Neobisium simoni* (L. Koch) and one tritonymph of *N. bernardi* Vachon with abnormal pedipalpal chelae were found. These were obtained by sifting leaf-litter and humus in a mixed oak forest. In the specimens studied, only the pedipalpal chelae were anomalous, the other appendages and abdominal sclerites were normal.

*NEOBISIUM SIMONI*: Female (Figs. 1 & 2). The fixed finger of the right chela of the pedipalp is reduced, being only half the normal length. Consequently, instead of four distal trichobothria, a single tactile seta is present (Fig. 1). Its relative position is more basal than in any of the distal trichobothria:



Figs. 1-2. *Neobisium simoni* (L. Koch). Scale line = 0.5 mm. (1) Right chela of the pedipalps, aberrant female, (2) Right chela of the pedipalps, normal female.



Figs. 3-4. *Neobisium bernardi* Vachon. Scale line = 0.5 mm. (3) Right chela of the pedipalps, aberrant tritonymph, (4) Right chela of the pedipalps, normal tritonymph.

therefore, its proper identification is not possible. In addition, the deficient finger carries 37 teeth only, whereas the normal complement is 58-64 teeth (Fig. 2). The movable finger is apparently normal and carries 60 teeth, which falls within the normal range for the movable finger (54-60 teeth) in females of this species.

*NEOBISIUM BERNARDI*: Tritonymph (Figs. 3, 4). The movable finger of the right pedipalpal chela is reduced and attains two-

thirds the normal length (Fig. 3). In addition, this finger carries two instead of three trichobothria (seta *t* is missing). The fixed finger is normal. The anomalous finger has 25 teeth and the normal complement is 32-38 teeth. They appear much smaller and more close-set than in normal specimens. The fixed finger carries 38 teeth (normal range is 35-40 teeth). In both *N. simoni* and *N. bernardi* studied left pedipalpal chelae are normal.

The pedipalpal anomalies in different species of *Neobisium* Chamberlin from the family Neobisiidae have been found to date in the adult (female) and tritonymph stages (*N. carpaticum*, *N. simoni*, *N. bernardi*). No deficiencies have been noted in the deutonymph or protonymph stages.

It appears probable that the origin of the pedipalpal anomalies analyzed should be sought in some irregularity of the ontogenic (? postembryonic) process.

We are grateful to Dr. Christian Juberthie, Director of the Laboratoire souterrain in Moulis, for his collaboration and permission to collect pseudoscorpions in the vicinity of Moulis.

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